

DATES & DATA

May 3
NSBE meets: The National Society of Black Engineers will meet at 6:30 p.m. May 3 at Texas Southern University, School of Technology, Rm. 316. For details, call Kimberly Topps at (281) 280-2917.

May 5
Astronomy seminar: The JSC Astronomy Seminar will meet at noon May 5 and 12 in Bldg. 31, Rm. 248A. For more information, call Al Jackson at x35037.
Spaceland Toastmasters meet: The Spaceland Toastmasters will meet at 7 a.m. May 5 and 12 at the House of Prayer Lutheran Church. For additional information, call George Salazar at x30162.
Communicators meet: The Clear Lake Communicators, a Toastmasters club, will meet at 11:30 a.m. May 5 and 12 at Lockheed Martin, 555 Forge River Rd. For details, call Allen Prescott at 282-3281 or Mark Caronna at 282-4306.
Spaceteam Toastmasters meet: The Spaceteam Toastmasters will meet at 11:30 a.m. May 5 and 12 at United Space Alliance, 600 Gemini. For details, call Patricia Blackwell at (281) 282-4302 or Brian Collins at x35190.

May 6
Warning System Test: The site-wide Employee Warning System will perform its monthly audio test at noon May 6. For more information, call Bon Gaffney at x34249.

May 11
NCMA meets: The National Contract Management Association will hold its education symposium at the University of Houston - Clear Lake May 11. For additional information, contact Marianne Ruiz at x38528.

May 12
IAAP meets: The Clear Lake/NASA Chapter of the International Association of Administrative Professionals (formerly Professional Secretaries International) will meet at 5:30 p.m. May 12 at Bay Oaks Country Club. Cost is \$16. For details and reservations, call Tami Barbour at (281) 488-0055, x238.


May 13
MAES meets: The Society of Mexican-American Engineers and Scientists will meet at 11:30 a.m. May 13 in Bldg. 16, Rm. 111. For details, call George Salazar at x30162.
Airplane club meets: The Radio Control Airplane Club will meet at 7 p.m. May 13 at the Clear Lake Park building. For additional information, call Bill Langdoc at x35970.

May 14
Astronomers meet: The JSC Astronomical Society will meet at 7:30 p.m. May 14 at the Center for Advanced Space Studies, 3600 Bay Area Blvd. For more information, call Chuck Shaw at x35416.
May 19
Scuba club meets: The Lunarfans will meet at 7:30 p.m. May 19. For details, call Mike Manering at x32618.
May 20
Directors meet: The Space Family Education board of directors will meet at 11:30 a.m. May 20 in Bldg. 45, Rm. 712D. For more information on this open meeting, call Gretchen Thomas at x37664.
May 24
Alzheimer's support group meets: The Clear lake Alzheimer's Caregiver Support Group will meet from 7:30 p.m. to 9 p.m. May 24 in the first floor conference room in St. John Hospital, West Building, in Nassau Bay. For more information, call Nancy Malley (281) 480-8917 or John Gouveia (281) 280-8517.
May 27
National Space Society: The National Space Society will hold the 18th annual International Space Development Conference May 27-31, 1999, at the Hobby Airport Radisson Hotel, 9100 Gulf Freeway. Call 1-800-333-3333 by May 12 for reservations at the \$75 rate.
Radio Club meets: The JSC Amateur Radio Club will meet at 6:30 p.m. May 27 at the Piccadilly, 2465 Bay Area Blvd. For details, call Larry Dietrich at x39198.

GILRUTH CENTER NEWS

Hours: The Gilruth Center is open from 6:30 a.m.-10 p.m. Monday-Thursday, 6:30 a.m.-9 p.m. Friday, and 9 a.m.-2 p.m. Saturday. Contact the Gilruth Center at (281) 483-3345.
Sign up policy: All classes and athletic activities are on a first-come, first-served basis. Sign up in person at the Gilruth Center and show a yellow Gilruth or weight room badge. Classes tend to fill up two weeks in advance. Payment must be made in full, in exact change or by check, at the time of registration. No registration will be taken by telephone. For more information, call x33345.
Gilruth badges: Required for use of the Gilruth Center. Employees, spouses, eligible dependents, NASA retirees and spouses may apply for photo identification badges from 7:30 a.m.-9 p.m. Monday-Friday and 9 a.m.-2 p.m. Saturdays. Cost is \$10. Dependents must be between 16 and 23 years old.
Nutrition intervention program: Six-week program includes lectures, a private consultation with the dietitian and blood analysis to chart your progress. For additional information, call Tammie Shaw at x32980.
Weight safety: Required course for employees wishing to use the Gilruth weight room. Pre-registration is required. Cost is \$5. Annual weight room use fee is \$90. The cost for additional family members is \$50.
Exercise: Low-impact class meets from 5:15-6:15 p.m. Mondays and Wednesdays. Cost is \$24 for eight weeks.

Defensive driving: One-day course is offered once a month at the Gilruth Center. Pre-registration required. Cost is \$25. Call for next available class.
Stamp club: Meets every second and fourth Monday at 7 p.m. in Rm. 216.
Step/bench aerobics: Low-impact cardiovascular workout. Classes meet from 5:15-6:15 p.m. Tuesdays and Thursdays. Cost is \$32 for eight weeks. Call Kristen Taragzewski, instructor, at x36891 for more information.
Yoga: Stretching class of low-impact exercises designed for people of all ages and abilities in a Westernized format. Meets Thursdays 5-6 p.m. Cost is \$32 for eight weeks. Call Darrell Matula, instructor, at x38520 for more information.
Ballroom dancing: Classes meet from 7-8:15 p.m. Thursdays for beginner-advanced classes and from 8:15-9:30 p.m. for beginner-intermediate and intermediate students. Cost is \$60 per couple.
Country and western dancing: Beginner class meets 7-8:30 p.m. Monday. Advanced class (must know basic steps to all dances) meets 8:30-10 p.m. Monday. Cost is \$20 per couple.
Fitness program: Health-related fitness program includes a medical screening examination and a 12-week individually prescribed exercise program. For more information call Larry Wier at x30301.

 <http://www4.jsc.nasa.gov/ah/exceaa/Gilruth/Gilruth.htm>

NASA BRIEFS

STORMS ROUSE URANUS FROM HIBERNATION

If springtime on Earth were anything like it will be on Uranus, we would be experiencing waves of massive storms, each one covering the country from Kansas to New York, with temperatures of 300 degrees below zero.

A dramatic new time-lapse movie by NASA's Hubble Space Telescope shows for the first time seasonal changes on the planet. Once considered one of the blander-looking planets, Uranus is now revealed as a dynamic world with the brightest clouds in the outer Solar System and a fragile ring system that wobbles like an unbalanced wagon wheel. The clouds are probably made of crystals of methane, which condense as warm bubbles of gas well up from deep in the atmosphere of Uranus.

The movie, created by Hubble researcher Erich Karkoschka of the University of Arizona, clearly shows for the first time the wobble in the ring system, which is made of billions of tiny pebbles. This wobble may be caused by Uranus' shape, which is like a slightly flattened globe, along with the gravitational tug from its many moons.

EXOTIC TECHNOLOGIES FINISH ROAD TEST ON COSMIC HIGHWAY

NASA's Deep Space 1 mission has successfully demonstrated most of its exotic technologies in space — including an ion engine that is expected to be ten times more efficient than conventional liquid or solid rocket engines — proving they are ready for use in science missions of the 21st century.

Of the 12 advanced technologies on board the spacecraft, seven have completed testing, including the ion propulsion system, solar array and new technologies in communications, microelectronics and spacecraft structures.

"We've taken these technologies around the test track, and now they're ready for the production line," said Dr. Marc Rayman, deputy mission manager and chief mission engineer for Deep Space 1 at the Jet Propulsion Laboratory.

DEPLOYED ANTENNA SENDING NEW MARS IMAGES

A steady stream of new data from Mars, including high-resolution images, has begun arriving at Earth receiving stations following deployment of the Mars Global Surveyor's high-power communications antenna.

"Having a deployed, steerable high-gain antenna is like switching from a garden hose to a fire hose in terms of data return from the spacecraft," said Joseph Beerer, flight operations manager for Mars Global Surveyor at the Jet Propulsion Laboratory.

The antenna was deployed March 28. It had been stowed since launch in November 1996 to reduce its chances of being contaminated by exhaust from the spacecraft's main engine, which was fired periodically throughout the mission. The spacecraft entered orbit around Mars in September 1997 and used a technique called aerobraking to gradually lower the spacecraft's altitude to the desired orbit for mapping. The mapping mission began March 9; full-scale mapping began April 4.